

REMARKS

Claim 1 has been amended to call for a composition comprising a copolymer made from (i) an alpha-methylene-lactone of Formula I, (ii) methylmethacrylate, and (iii) from 10 to 80 wt% of a filler, provided that the alpha-methylene-lactone of Formula I accounts for 1 to 95 mol% of the repeat units in the copolymer. Note that the variable "n" has been limited to 0 (zero) and X has been limited to oxygen, thus defining 5-membered lactones. (R^3 and R^4 thus become superfluous) R^1 , R^2 , R^5 and R^6 have been limited to hydrogen or methyl. ("Methyl" is supported in the specification at page 5, lines 22 to 25 where "hydrocarbyl" is explicitly defined as including a one carbon, univalent radical, i.e., methyl.) Note also that the "free radically copolymerizable monomer" has been limited to methylmethacrylate, which is explicitly taught in the specification. Thus, Applicants submit that no new matter has been introduced into the amended claim.

Claim 3 restricts Claim 1 by requiring from 40 to 60 wt% of the filler.

Claim 5 restricts the filler to $Al(OH)_3$ (alumina trihydrate).

Claim 11 has been amended to clarify that the claimed composition is a polymerizable composition and not one that is already polymerized (hence the recitation of an initiator).

Claim 42 has been amended to conform to the composition defined in Claim 1.

Claim 43 has been amended to restrict the filler of Claim 42 to alumina trihydrate.

In sum, then, the only claims that are pending in the application are Claims 1, 3, 5, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, and 43.

Polymeric compositions defined by Claim 1 possess good heat resistance (i.e. no cracking), resistance to abrasion and good (relatively fast) cure times. In addition, the compositions are significantly optically opaque due to the presence of the filler.

The rejection of these claims under 35 USC 103(a), to the extent the Examiner may choose to continue to apply it, is respectfully, but strenuously traversed.

As an initial matter, Applicants point out that the principal reference (Schwind) does not teach the combination of the compound of Formula I, wherein n is 0, X is O, and R^1 , R^2 , R^5 and R^6 are all H (alpha-methylene-butyrolactone) and methylmethacrylate. In fact, this combination is explicitly excluded by Schwind. See Col.3, line 63.

This leaves open for discussion the combination of the other monomers of Formula I and methylmethacrylate.

Schwind teaches, as the Examiner pointed out in the outstanding Office Action, that his polymers possess several desirable properties, including good thermal dimensional stability. Another property, perhaps overlooked by the Examiner, is the property of "high transparency." See Col. 3, line 16. Schwind teaches in Table 1 that certain combinations of methylmethacrylate with lactones of the present Formula I are either "clear" or "slightly opaque". See the following entries in Schwind Table 1:

<u>Example</u>	<u>Transparency</u>
5	"slightly opaque"
17	"clear"
17a	"clear"
20	"clear"
24	"clear"
27	"clear"

As can be seen, most of the Schwind materials are "clear", consistent with Schwind's general statement at Col. 3, Line 16. As the Examiner has observed, Schwind does not teach the addition of fillers to his polymers, and hence the Examiner has cited Moorman as a secondary reference, teaching the use of fillers in certain polymers. It is well established, however, that teachings of two references may not be combined unless the references would motivate a person of ordinary skill in the art to make the combination--without the benefit of the Applicant's own disclosure.

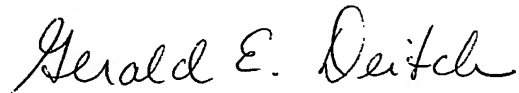
The legally required motivation does not exist here.

Given that one of Schwind's explicit goals is the making of optically transparent polymers, a person of ordinary skill in the art would not incorporate fillers into such polymers because such fillers surely would make the Schwind polymers increasingly opaque as the amount of filler is increased. Note that newly amended Claim 1 calls for a minimum of 10 wt% filler, and that Claim 3 calls for a minimum of 40 wt%. Therefore, the combination of the Moorman filler with the Schwind polymer would destroy one of the very properties that Schwind teaches as desirable.

Finally, in relation to Claims 36 and 38, dealing with antimicrobial properties, Applicants point out that even if compounds like alpha-methylene-butyrolactone may be expected to have antimicrobial properties, it is not apparent that alpha-methylene-butyrolactone--incorporated into a polymer--would impart such properties to the polymer into which the alpha-methylene-butyrolactone is incorporated.

For the foregoing reasons, Applicants submit that the claims as amended herein define both novel and non-obvious subject matter and request favorable reconsideration.

Respectfully submitted,



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